M1 width of the 2_1^+ state in ^{22}Na and searches for tensor contributions to beta decays[1] STEVEN STEININGER, ALEJANDRO GARCIA, University of Washington, SMARAJITE TRIAMBAK, TRIUMF, DEVIN SHORT, DAVID WILLIAMS, University of Washington — A determination of the $\beta - \gamma$ angular correlation from ^{22}Na beta decay with the GAMMASPHERE array has been used to extract induced-tensor-currents contributions to the weak interaction. The result, together with other available experimental data yielded an unexpectedly large induced tensor (second class) component to the hadronic current, which is at variance with the Standard Model. A weak link in the data used for this analysis is another recoil-order term, the weak magnetism form factor, which was extracted from an independent unpublished determination of the analog isovector magnetic dipole ($2^+ \rightarrow 3^+$) gamma-ray transition strength in ^{22}Na with low statistics and significant backgrounds. We are currently running an experiment to measure the Γ_{M1} value from $E_x = 1952$ keV state using a well known 21Ne(p, γ) resonance at Ep = 1112 keV. This resonance leads to a gamma cascade in 22Na at $E_x = 7800 \rightarrow 1952 \rightarrow 0$ keV. We will use a $\gamma - \gamma$ coincidence setup with a 120% HPGe detector and a large 10×10 NaI detector. This method will provide both high detection efficiency and reduced backgrounds.

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